

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
13 November 2003 (13.11.2003)

PCT

(10) International Publication Number
WO 03/092757 A1(51) International Patent Classification⁷: A61L 15/60, 15/42

(21) International Application Number: PCT/EP03/04437

(22) International Filing Date: 29 April 2003 (29.04.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/376,961 1 May 2002 (01.05.2002) US

(71) Applicant (for all designated States except US): BASF AKTIENGESELLSCHAFT [DE/DE]; 67056 Ludwigshafen (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): HERFERT, Norbert [DE/US]; 3204 Trefoil Drive, Charlotte, NC 28226-7200 (US). MITCHELL, Michael [US/US]; 8805 Sweetwater Pl., Waxhaw, NC 28173 (US). ENGELHARDT, Friedrich [DE/DE]; Hünfelderstr.20, 60386 Frankfurt (DE).

(74) Common Representative: BASF AKTIENGESELLSCHAFT; .. 67056 Ludwigshafen (DE).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, VZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

53478
086040

(54) Title: PLASTICIZED SUPERABSORBENT POLYMER SHEETS AND USE THEREOF IN HYGIENIC ARTICLES

(57) Abstract: A flexible absorbent sheet material containing an acidic water-absorbing resin, a basic water-absorbing resin, and a plasticizer, and its method of manufacture, are disclosed. The sheets contain about 60% to 100% by weight of the acidic and basic water-absorbent resin and plasticizer. The absorbent sheets have unexpected flexibility and structural integrity, while exhibiting exceptional water absorption and retention properties.

WO 03/092757 A1

AP

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/EP 03/04437

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61L15/60 A61L15/42

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| X | US 2002/007166 A1 (MITCHELL MICHAEL A ET AL) 17 January 2002 (2002-01-17) paragraph '0002! paragraph '0092! paragraph '0305! - paragraph '0312! claims 1-3,9,26,32,33 ----- | 1-27 |
| A | US 5 324 561 A (IWASAKI TOSHIAKI ET AL) 28 June 1994 (1994-06-28) column 2, line 61 -column 3, line 5 column 14, line 35 -column 15, line 11 column 21, line 63 -column 22, line 17 claims 1,4-8 ----- | 1-27 |

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the International filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

7 October 2003

Date of mailing of the international search report

16/10/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Heck, 6

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP 03/04437

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---------------------|----------------------------|---------------------|
| US 2002007166 | A1 | 17-01-2002 | |
| | | US 2001007064 A1 | 05-07-2001 |
| | | US 6194631 B1 | 27-02-2001 |
| | | US 6392116 B1 | 21-05-2002 |
| | | US 6222091 B1 | 24-04-2001 |
| | | WO 02100032 A1 | 12-12-2002 |
| | | AU 1396499 A | 07-06-1999 |
| | | BR 9814680 A | 03-10-2000 |
| | | CA 2310675 A1 | 27-05-1999 |
| | | CN 1286702 T | 07-03-2001 |
| | | EP 1034194 A1 | 13-09-2000 |
| | | FI 20001106 A | 29-06-2000 |
| | | JP 2001523737 T | 27-11-2001 |
| | | NO 20002547 A | 13-06-2000 |
| | | PL 340545 A1 | 12-02-2001 |
| | | WO 9925745 A1 | 27-05-1999 |
| | | US 2003014027 A1 | 16-01-2003 |
| | | AU 1522199 A | 07-06-1999 |
| | | BR 9814686 A | 20-11-2001 |
| | | CA 2310691 A1 | 27-05-1999 |
| | | CN 1286635 T | 07-03-2001 |
| | | EP 1042013 A2 | 11-10-2000 |
| | | FI 20001087 A | 28-06-2000 |
| | | HR 20000308 A1 | 31-12-2000 |
| | | HU 0101141 A2 | 28-08-2001 |
| | | JP 2001523733 T | 27-11-2001 |
| | | NO 20002546 A | 20-06-2000 |
| | | PL 340959 A1 | 12-03-2001 |
| | | SI 20362 A | 30-04-2001 |
| | | SK 7372000 A3 | 09-10-2000 |
| | | TR 200001461 T2 | 21-08-2001 |
| | | WO 9925393 A2 | 27-05-1999 |
| | | US 6342298 B1 | 29-01-2002 |
| | | US 6555502 B1 | 29-04-2003 |
| | | US 2001001312 A1 | 17-05-2001 |
| | | US 2002015846 A1 | 07-02-2002 |
| US 5324561 | A | 28-06-1994 | |
| | | AT 161736 T | 15-01-1998 |
| | | AU 679698 B2 | 10-07-1997 |
| | | AU 5291193 A | 26-04-1994 |
| | | BR 9307171 A | 30-03-1999 |
| | | CA 2144187 A1 | 14-04-1994 |
| | | CN 1093285 A ,B | 12-10-1994 |
| | | CZ 9500825 A3 | 18-10-1995 |
| | | DE 69316227 D1 | 12-02-1998 |
| | | DE 69316227 T2 | 30-04-1998 |
| | | DK 662848 T3 | 09-02-1998 |
| | | EG 20078 A | 31-05-1997 |
| | | EP 0662848 A1 | 19-07-1995 |
| | | ES 2111187 T3 | 01-03-1998 |
| | | FI 951549 A | 10-05-1995 |
| | | GR 3025847 T3 | 30-04-1998 |
| | | HK 1008139 A1 | 30-04-1999 |
| | | HU 72728 A2 | 28-05-1996 |
| | | JP 8502183 T | 12-03-1996 |
| | | MX 9306172 A1 | 31-01-1995 |
| | | NO 951234 A | 12-05-1995 |
| | | NZ 256946 A | 24-03-1997 |
| | | SG 48854 A1 | 18-05-1998 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP 03/04437

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---------------------|----------------------------|---------------------|
| US 5324561 | A | WO 9407546 A1 | 14-04-1994 |
| | | US 5451353 A | 19-09-1995 |